# Lab Worksheet

**Hypotheses:**

Activity 1

Sinuosity Hypothesis:

Velocity Hypothesis:

Relief Hypothesis:

Gradient Hypothesis:

Activity 2

Sinuosity Hypothesis:

Velocity Hypothesis:

Relief Hypothesis:

Gradient Hypothesis:

**Observations/Data Tables:**

Data Table 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Trial** | **Sinuosity** | **Velocity**  **(cm/s)** | **Relief**  **(cm)** | **Gradient** |
| Thicker Book | 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| Thinner Book | 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

Data Table 2.

Variable changed:

Book thickness used:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trial** | **Sinuosity** | **Velocity**  **(cm/s)** | **Relief**  **(cm)** | **Gradient** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

**Calculations:**

Activity 1.

Sinuosity:

Curvy distance (cm) / Straight distance (cm) = sinuosity (*no units*)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

Both the curvy and straight distances are measurements taken from the stream formation in the stream table. Please refer to Activity 1 for more details.

Velocity

Distance traveled (cm) / Time it takes to travel (s) = Velocity (cm/s)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

The distance it takes a small piece of paper to travel downstream divided by how long it takes to get downstream is the velocity. Refer to Activity 1 for more details.

Relief

Highest elevation (cm) – Lowest elevation (cm) = Relief (cm)

\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_ =

By subtracting the highest elevation of the stream and the lowest elevation of the stream from each other, the relief can be calculated. Please refer to Activity 1 for more details.

Gradient

Relief (cm) / Total distance (cm) = Gradient (*no units*)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

By dividing the relief by the total distance of the stream, the gradient can be calculated. Please refer to Activity 1 for more details.

ACTIVITY 2

Sinuosity

Curvy distance (cm) / Straight distance (cm) = sinuosity (no units)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

Both the curvy and straight distances are measurements taken from the stream formation in the stream table. Please refer to Activity 1 for more details.

Velocity

Distance traveled (cm) / Time it takes to travel (s) = Velocity (cm/s)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

The distance it takes a small piece of paper to travel downstream divided by how long it takes to get downstream is the velocity. Refer to Activity 1 for more details.

Relief

Highest elevation (cm) – Lowest elevation (cm) = Relief (cm)

\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_ =

By subtracting the highest elevation of the stream and the lowest elevation of the stream from each other, the relief can be calculated. Please refer to Activity 1 for more details.

Gradient

Relief (cm) / Total distance (cm) = Gradient (*no units*)

\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_ =

By dividing the relief by the total distance of the stream, the gradient can be calculated. Please refer to Activity 1 for more details.